


**ENTREPRENEURIAL ECOSYSTEM AND TOURISM FIRMS' SURVIVAL IN THE COVID-19 PANDEMIC CRISIS: A CASE STUDY OF DAKLAK PROVINCE, VIETNAM**

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| ARTICLE INFO   | ABSTRACT   |
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| <p><b>Article history:</b></p> <p><b>Received</b> 01 August 2023</p> <p><b>Accepted</b> 02 November 2023</p> | <p><b>Purpose:</b> This paper aims to analyze the entrepreneurial situation during the COVID-19 pandemic, focusing on firms in the tourism sector. Specifically, we seek to identify factors that belong to the Entrepreneurial Ecosystem (EE) of Dak Lak province, supporting entrepreneurial firms' survival during the COVID-19 pandemic.</p>   |
| <p><b>Keywords:</b></p> <p>Entrepreneurial Ecosystems;<br/>COVID-19;<br/>Survivals.</p>                      | <p><b>Theoretical framework:</b> We applied the EE model developed by Isenberg (2011) to the province of Dak Lak, where we analyzed the effects of EE on the ability of new businesses in the community-based tourism sector to withstand the impact of the COVID-19 pandemic.</p> <p><b>Design/methodology/approach:</b> We conducted a survey of 206 entrepreneurs, of whom 108 are entrepreneurs in the tourism sector or communities-based tourist destinations. These surveyed entrepreneurs participated in two startup contests the Dak Lak Province organized in 2018 and 2020.</p>  |
|                            | <p><b>Findings:</b> It was found that the COVID-19 pandemic particularly devastated small businesses in the travel and tourism sector. In addition, only two components of EE provide relief to these companies: FINANCE and CULTURE. Without a doubt, microcredit, loans, and debt refinancing funds, as well as the general liquidity of the financial market, help young businesses stay afloat. Additionally, the community's culture of risk-taking, failure acceptance, success-seeking, and lofty aspirations underpins their attempt to keep the business afloat during difficult times.</p> <p><b>Research, Practical &amp; Social implications:</b> We suggested that Dak Lak province develop its EE by upgrading its elements as soon as possible to cope with future crises.</p> <p><b>Originality/value:</b> This study gives a new direction on the specific approach to improve the EE of a province of Vietnam and shows ways for better performance of the EE.</p> <p><b>Conclusion:</b> We found that FINANCE and CULTURE components play a positive role in assisting early-stage tourism firms. Specifically, the availability and accessibility of the financial market, including micro-credit, support entrepreneurial firms in maintaining their operation. In addition, the culture of tolerance of risks and failure, efforts for success, and high ambition is the basis for the action of entrepreneurs to continue their businesses.</p> <p>Doi: <a href="https://doi.org/10.26668/businessreview/2023.v8i11.3134">https://doi.org/10.26668/businessreview/2023.v8i11.3134</a></p> |

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## ECOSSISTEMA EMPRESARIAL E SOBREVIVÊNCIA DE EMPRESAS DE TURISMO NA CRISE DA PANDEMIA DA COVID-19: UM ESTUDO DE CASO DA PROVÍNCIA DE DAKLAK, VIETNÃ

### RESUMO

**Objetivo:** O presente documento tem como objetivo analisar a situação empresarial durante a pandemia da Covid-19, concentrando-se em empresas do setor do turismo. Especificamente, buscamos identificar fatores que pertencem ao Ecosistema Empreendedor (EE) da província de Dak Lak, apoiando a sobrevivência de empresas empreendedoras durante a pandemia da Covid-19.

**Quadro teórico:** aplicamos o modelo EE desenvolvido por Isenberg (2011) à província de Dak Lak, onde analisamos os efeitos da EE na capacidade de novas empresas do setor turístico comunitário para suportar o impacto da pandemia da Covid-19.

**Design/Methodologia/Abordagem:** Realizamos um levantamento de 206 empreendedores, dos quais 108 são empreendedores no setor de turismo ou destinos turísticos baseados em comunidades. Esses empreendedores pesquisados participaram de dois concursos de start-ups organizados pela Província de Dak Lak em 2018 e 2020.

**Constatações:** Constatou-se que a pandemia da Covid-19 devastou particularmente pequenas empresas no setor de viagens e turismo. Além disso, apenas duas componentes da EE fornecem alívio a estas empresas: FINANÇAS e CULTURA. Sem dúvida, o microcrédito, os empréstimos e os fundos de refinanciamento da dívida, bem como a liquidez geral do mercado financeiro, ajudam as empresas jovens a manter-se em atividade. Além disso, a cultura da comunidade de assumir riscos, aceitação de falhas, busca de sucesso e aspirações elevadas sustenta sua tentativa de manter os negócios em atividade durante tempos difíceis.

**Investigação, Implicações práticas e Sociais:** sugerimos que a província de Dak Lak desenvolvesse a sua EE, atualizando os seus elementos o mais rapidamente possível para lidar com futuras crises.

**Originalidade/Valor:** Este estudo dá uma nova orientação sobre a abordagem específica para melhorar o EE de uma província do Vietname e mostra maneiras de melhorar o desempenho do EE.

**Conclusão:** O Tribunal constatou que os componentes FINANCEIROS e CULTURAIS desempenham um papel positivo na assistência às empresas de turismo em fase inicial. Concretamente, a disponibilidade e a acessibilidade do mercado financeiro, incluindo o microcrédito, ajudam as empresas empresariais a manter o seu funcionamento. Além disso, a cultura de tolerância aos riscos e ao fracasso, os esforços para o sucesso e a alta ambição são a base para a ação dos empresários para continuar seus negócios.

**Palavras-chave:** Ecosistemas Empresariais, COVID-19, Sobrevivências.

## LA SUPERVIVENCIA DE EMPRESAS TURÍSTICAS Y ECOSISTEMAS EMPRESARIALES EN LA CRISIS DE LA PANDEMIA DE COVID-19: UN ESTUDIO DE CASO DE LA PROVINCIA DE DAKLAK (VIETNAM)

### RESUMEN

**Objetivo:** Este trabajo tiene como objetivo analizar la situación empresarial durante la pandemia de COVID-19, centrándose en las empresas del sector turístico. Específicamente, buscamos identificar los factores que pertenecen al Ecosistema Empresarial (EE) de la provincia de Dak Lak, apoyando la supervivencia de las empresas emprendedoras durante la pandemia de COVID-19.

**Marco teórico:** Aplicamos el modelo EE desarrollado por Isenberg (2011) a la provincia de Dak Lak, donde analizamos los efectos de EE en la capacidad de las nuevas empresas del sector turístico comunitario para resistir el impacto de la pandemia de COVID-19.

**Diseño/Methodología/Enfoque:** Realizamos una encuesta a 206 empresarios, de los cuales 108 son empresarios del sector turístico o de destinos turísticos de base comunitaria. Estos empresarios encuestados participaron en dos concursos de emprendimientos que la provincia de Dak Lak organizó en 2018 y 2020.

**Conclusiones:** Se constató que la pandemia de COVID-19 devastó especialmente a las pequeñas empresas del sector de los viajes y el turismo. Además, solo dos componentes de EE proporcionan alivio a estas empresas: FINANZAS y CULTURA. Sin duda, el microcrédito, los préstamos y los fondos de refinanciamiento de deuda, así como la liquidez general del mercado financiero, ayudan a las empresas jóvenes a mantenerse a flote. Además, la cultura de toma de riesgos, aceptación del fracaso, búsqueda de éxito y elevadas aspiraciones de la comunidad apuntala su intento de mantener el negocio a flote en tiempos difíciles.

**Investigación, Implicaciones prácticas y Sociales:** Sugerimos que la provincia de Dak Lak desarrolle su EE actualizando sus elementos lo antes posible para hacer frente a futuras crisis.

**Originalidad/Valor:** Este estudio da una nueva dirección sobre el enfoque específico para mejorar la EE de una provincia de Vietnam y muestra maneras de un mejor rendimiento de la EE.

**Conclusión:** Se encontró que los componentes de FINANZAS y CULTURA juegan un papel positivo en la asistencia a las empresas turísticas en etapa temprana. Concretamente, la disponibilidad y accesibilidad del

mercado financiero, incluido el microcrédito, ayudan a las empresas a mantener su actividad. Además, la cultura de tolerancia a los riesgos y el fracaso, los esfuerzos por el éxito y la gran ambición es la base de la acción de los empresarios para continuar con sus negocios.

**Palabras clave:** Ecosistemas Empresariales, COVID-19, Supervivencia.

## INTRODUCTION

Because entrepreneurship is fraught with risk and uncertainty, it is regarded as the most significant output of an entrepreneurial ecosystem (EE) (Stam and Spigel, 2016). Based on their assessments, entrepreneurs put their ideas into action by generating goods, services, and employment opportunities for the community. On the other hand, crises frequently happen unexpectedly and cause issues for businesses, particularly those in the early stages. Entrepreneurial firms typically fail for various reasons, but the main ones are lack of experience, capital, and other production-related issues combined with a smaller market. Therefore, the outcomes of entrepreneurial continuation depend on various factors in an EE in addition to the entrepreneurs' skills.

EE building is a popular movement that has been started in Vietnam for decades. Governments have identified national and regional EEs thriving as the backbones upon which innovations and new business models can be built and maintained. This trend has caught on at the local level nationwide, inspiring new businesses and revitalizing local economies. The documents of the Communist Party of Vietnam's XII and XIII Congresses (2016, 2021) affirm that the private economy is a vital driving force in Vietnam's socialist-oriented market economy. The EE is the answer to promoting entrepreneurship in Vietnam. Dak Lak province (2018) issued Plan No. 2272/KH-UBND to support innovative and entrepreneurial businesses. The primary goals of this plan are to promote the development of the provincial EE and boost entrepreneurial activities based on the exploitation of intangible assets and 4.0 Revolution opportunities that contribute to job creation, labor productivity, and product quality to achieve long-term growth. As a result, considerable effort has been expended to improve the provincial EE. However, Thao (2020) assessed the EE of Dak Lak province and classified it at an early stage.

From 2019 to 2022, Vietnam experienced a prolonged COVID-19 epidemic. It has resulted in 11 million confirmed COVID-19 cases (the most in Southeast Asia and the 13th in the world) and 43 thousand deaths. According to the Vietnamese Ministry of Health, the actual number of cases could be four to five times higher (OWID, 2022; VTC Now, 2021). Its complicated nationwide developments affected all aspects of the socio-economic system due to

pandemic control measures such as physical distancings or lockdowns. Companies have been rapidly reorganizing production, digital transformation, and changing business methods to adapt to the epidemic to deal with it.

The tourism sector of Vietnam was heavily affected by the pandemic. From 2019 to 2021, the Vietnamese tourism industry has witnessed an unprecedented labor crisis. According to the Ministry of Culture, Sports, and Tourism statistics, more than 300 international travel companies had to request permit recalls, and 90% of travel businesses had to close. In 2020, travel companies had to reduce their workforce by 70-80%. The COVID-19 pandemic has also significantly affected the recruitment efforts of tourism-related training institutions, causing difficulties in enrollment and resulting in a labor shortage for the tourism industry after recovery. Tourism, hotel, and travel companies have reported that the current workforce can only meet 50-60% of market demand (Nguyen Thi Thu, 2022).

This paper aims to analyze the entrepreneurial situation during the COVID-19 pandemic, focusing on firms in the tourism sector. Specifically, we seek to identify factors that belong to the EE of Dak Lak province supporting the survival of entrepreneurial firms during the COVID-19 pandemic. We analyze the provincial EE elements' role based on the model Isenberg (2011) with a survey of 206 entrepreneurs, of whom 108 are entrepreneurs in the tourism sector or communities-based tourist destinations. These surveyed entrepreneurs participated in two contests the Dak Lak Province organized in 2018 and 2020.

## **LITERATURE REVIEW**

### **Determinants of Business Survival**

Numerous studies looked into elements that increased a company's chance of surviving, particularly in times of crisis. Business processes are highly productive and efficient, as noted by Cefis and Marsili (2006), Shiferaw (2009), Cefis and Marsili (2012), Ejermo and Xiao (2014), and Zhao and Burt (2018). They claimed that more efficient companies would be more likely to stay in business. In order to maintain these businesses, internal factors are crucial. According to Bruderl et al. (1992), managers with excellent experience significantly increase their firms' productivity, which lowers the likelihood of failure. Thus, it is likely that young entrepreneurial firms experience a crisis that is more severe than that experienced by established ones. According to Belda and Cabrer's (2018) research, past survival in trying circumstances is strongly correlated with prior experience. The ownership structure affects whether or not business operations will continue. Companies with two or more entrepreneurs fare better in

terms of longevity (Irastorza, 2006; Arribas and Vila, 2007). Entrepreneurial genders and the likelihood of a business failing are closely related. Women business owners' survival rate is lower than men's (Boyer and Blazy, 2014; Kato and Honjo, 2015).

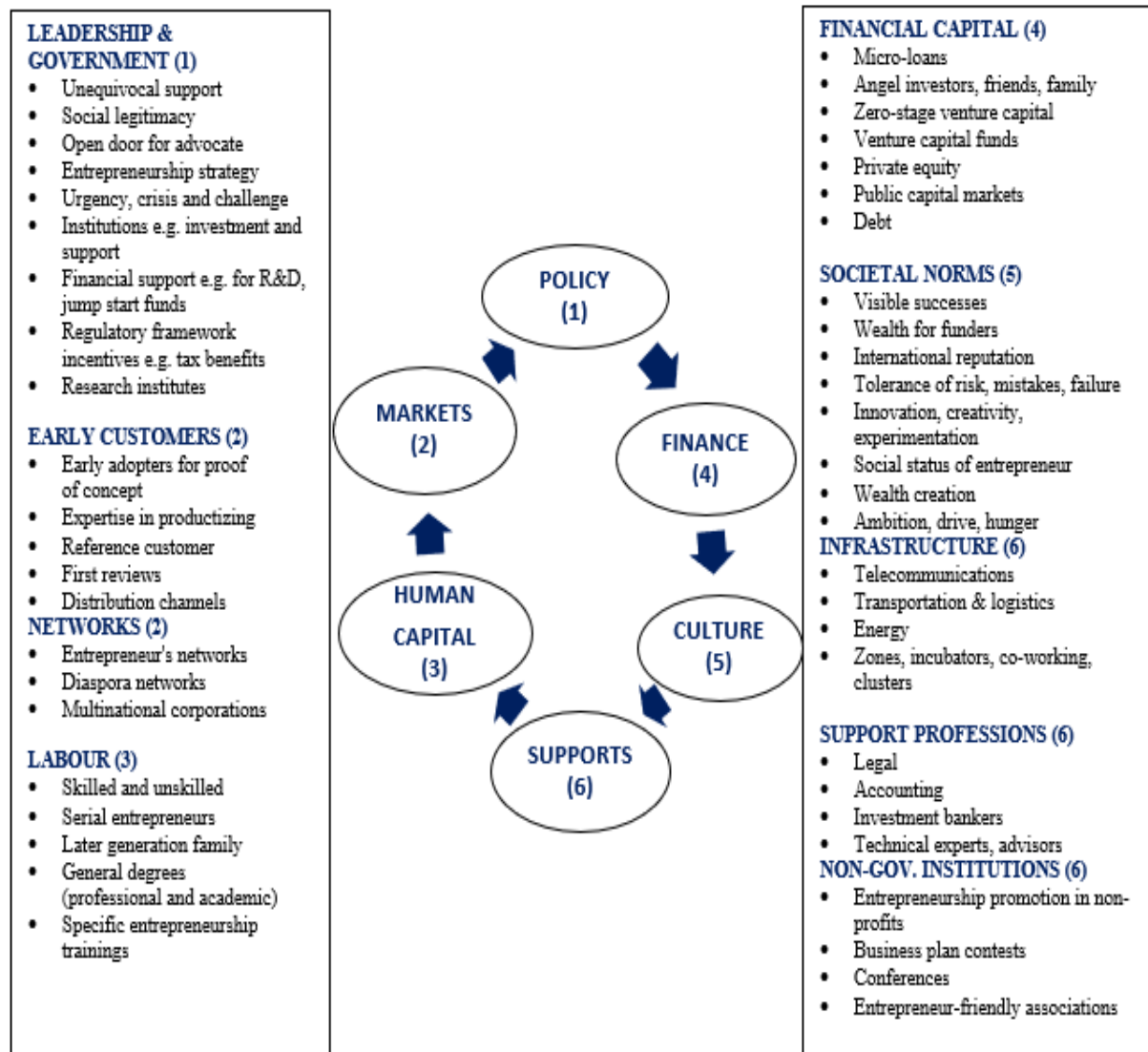
Several works draw attention to various external factors that are beneficial to businesses. They emphasized the part played by the EE. The EE is a newly developed concept that refers to the interactions between living things and their environments using language from the biological sciences (Aldrich, 1990). The first person to use this phrase to describe the shifting business environment was Moore (1993), a business advisor for Harvard Business Review. He argued that companies don't develop in isolation. They develop through interaction with vendors, financial institutions, and clients.

Consequently, these elements have a direct impact on entrepreneurship as well. Porter (1990) argues that knowledge spillovers spark progress in geographically concentrated industries. Therefore, technological externalities develop within the sector, and regional specialization is crucial to maintaining business operations. According to Muldoon et al. (2018), EEs must provide resources to all neighborhood startups and established entrepreneurial businesses. An EE tends to produce the resources required for new venture development (Muldoon et al., 2018). An EE, however, is a dynamic system, so it depends on a variety of factors in order to survive. For instance, the COVID-19 pandemic caused actors along supply chains for companies to be hampered by security measures like physical seclusion and social lockdown. Because they have fewer resources, new and small businesses are more susceptible to this type of crisis. In addition, they operate on limited cash reserves and do not have savings to help them survive difficult situations (Shankar, 2020). Budhwar and Cumming (2020) argued that developed EE, via their elements, allows entrepreneurs to go through hardship. As an element of an EE, government support (such as COVID-19 loans, debt relief, and grants) was considered an effective measure to enhance entrepreneurs' ability to cope with the COVID-19 crisis to continue operating and paying their employees (OECD, 2021). Rukumnuaykit (2022) examined how COVID-19 affected Thailand's travel and tourism industry. He discovered that most businesses experienced a decline in revenues due to the pandemic, and they made efforts to survive by cutting hours worked and wages. If specific EE components work correctly, this situation might be less stressful. Additionally, he recommended that the conventional business model be modified to accommodate tourists' needs in light of their new post-COVID lifestyles.



## Questionnaire Design

Figure 1. Six components and elements of an EE



Source: Isenberg, 2011

*Focus Group Discussion:* The EE of Dak Lak is still in its early stages (Thao, 2020). Consequently, when we compare them to Isenberg (2011), some components are missing. We conducted a focus group discussion (FGD) to glean available elements of the EE in order to avoid posing questions about non-existent aspects of the EE. To discuss and create a list of the current EE components, we gathered a group of 14 entrepreneurs from Buon Ma Thuot City, 13 administrative districts, and other areas. In Table 1, we provided these EE (items) elements that were derived from the FGD.

Table 1: Results of FGD and questionnaire design

| EE elements  | Designed Items   | Denoted |
|--|--|---------|
| <b>POLICY (1)</b>  |  |         |
| Unequivocal support  | The local government strongly supports entrepreneurs.                                  | P1      |
| Entrepreneurship Strategy                                      | The provincial entrepreneurial strategy is very supportive of entrepreneurs.           | P2      |
| Financial support for R&D                                      | The government financially supports R&D in early-stage businesses                      | P3      |
| Regulatory Framework incentives                                | Entrepreneurial businesses can receive tax benefits                                    | P4      |
| <b>MARKET (2)</b>  |  |         |
| Expertise in productizing/ Early adopters for proof of concept | There are enough early adopter customers for minimum viable products.                  | M1      |
| Distribution channels  | It is easy to build a distribution channel for minimum-viable products                 | M2      |
| Entrepreneur's network   | The provincial business associations significantly support entrepreneurial businesses. | M3      |
| <b>HUMAN CAPITAL (3)</b>                                       |  |         |
| Skilled and unskilled  | Entrepreneurs can find suitable laborers for their businesses                          | H1      |
| Serial entrepreneur  | You have a lot of experience in starting a business.                                   | H2      |
| General degrees  | Your education is high   | H3      |
| Specific entrepreneurship training                             | You are well-trained for entrepreneurship  | H4      |
| <b>SUPPORTS (6)</b>  |  |         |
| Telecommunications   | You have internet and can employ it very well.   | S1      |
| Transportation & logistics                                     | Logistics is excellent in your location  | S2      |
| Technical experts, advisors                                    | You can quickly find technical experts and advisors in case needed.                    | S3      |
| Business plan contests   | The entrepreneurial contests were beneficial for me in starting a business             | S4      |
| Entrepreneur-friendly associations                             | It is very beneficial for you to join Entrepreneurial associations                     | S5      |
| <b>CULTURE (5)</b>   |  |         |
| Visible success  | Visible successes strongly encourage you to start your business                        | C1      |
| Tolerance of risk, mistakes, failure                           | You think people in your community are very tolerant of risk and failure.              | C2      |
| Social status of the entrepreneur                              | Your community highly appreciates entrepreneurs  | C3      |
| Ambition, drive, hunger  | You do think people in your community have a high ambition                             | C4      |
| <b>FINANCE (4)</b>   |  |         |
| Micro-loans  | It is easy for entrepreneurs to access micro-credit funds in your location             | F1      |
| Capital markets  | It is easy for entrepreneurs to access formal capital markets                          | F2      |
| Debts  | It is easy for entrepreneurs to refinance debts  | F3      |

Source: FGD outputs

The EE model of Isenberg (2011) consists of six components. The first Component is POLICY. The long-term commitment of support by the government, local leaders, and community leaders enhances the ability to sustain entrepreneurial activities. The second Component is MARKET, the characteristics of the market where entrepreneurial firms operate, particularly potential customers or market growth. The third Component is HUMAN CAPITAL

(labor and educational institutions), which is essential for developing an EE because businesses forming and operating require good human resources and a sufficient supply of laborers. The fourth Component is FINANCE, which consists of credit and financial markets. The fifth Component is CULTURE. It involves a culture of community engagement, risk-taking, acceptance of failure, and an ethos that values entrepreneurs. The sixth Component is SUPPORT. It relates to support for entrepreneurs from Government, NGOs, and industry leaders.

### **Data Collection**

Entrepreneurs will discuss the existing elements of Dak Lak's EE. This qualitative information is integrated and compared with features proposed by Isenberg (2011). For the FGD, we selected 14 winners in the entrepreneurial competitions in 2018 and 2020 in 13 districts and Buon Ma Thuot City to form the group.

Based on the list of entrepreneurs participating in entrepreneurial competitions in 2018 and 2020 in Dak Lak province (including district-level competitions), we sent a structured questionnaire (Google Form). We employed a Likert scale of 1 to 5 to measure the EE's elements and other factors backing the survival of entrepreneurial firms. The questionnaire included structured questions. The answering options for each question are: (1) Strongly disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Strongly agree. After removing irrelevant answers, we have a sample size of 206 entrepreneurs. The contents of the questionnaire are in Table 1.

## **RESEARCH METHODOLOGY**

### **Hypothesis**

H1 to H6 hypothesize the relationship between our six essential components derived from Isenberg (2011) and the survival of entrepreneurial firms. These components are all assumed to be positively related to the probability that the correspondent business remains in operation. For this reason, elements of these components were evaluated by entrepreneurs in the survey (see Table 1). Thus, the six hypotheses are as follows:

***Hypothesis 1 (H1):*** *The POLICY component of the Dak Lak EE raises the likelihood that an entrepreneurial business will continue to operate.*

***Hypothesis 2 (H2):*** *The MARKET component of the Dak Lak EE increases the probability that an entrepreneurial business remains in operation.*



**Hypothesis 3 (H3):** The HUMAN CAPITAL component of the Dak Lak EE increases the probability that an entrepreneurial business remains in operation.

**Hypothesis 4 (H4):** The FINANCE component of the Dak Lak EE increases the probability that an entrepreneurial business remains in operation.

**Hypothesis 5 (H5):** The CULTURE component of the Dak Lak EE increases the probability that an entrepreneurial business remains in operation.

**Hypothesis 6 (H6)** The SUPPORT component of the Dak Lak EE increases the probability that an entrepreneurial business remains in operation.

## Analytic Methods

We analyzed the role of the Dak Lak EE in two steps. In the first step, we use Exploratory Factor Analysis (EFA) to identify factors of the Dak Lak EE to improve the survivability of firms. In the second step, we use Binary Logistic Regression to estimate the impact of these factors on the likelihood of a business's survival. Specifically, the logistic regression model is written as follows:

$$\frac{P(Y=1|D,Z,X)}{1-P(Y=1|D,Z,X)} = e^{(\alpha_0 + \sum_{i=1}^3 \alpha_i D_i + \gamma_1 Z_1 + \sum_{j=1}^6 \beta_j X_j + e)} \quad (1)$$

In equation (1),  $D_i, i = \overline{1,3}$  are dummy variables (ethnicity, gender, and age). The COVID-19 impact is denoted  $Z_1$  (measuring the negative impact of the COVID-19 pandemic on business activities).  $X_j, j = \overline{1,6}$  : variables represent the Dak Lak EE's elements, and  $e$  is random errors.

Taking the logarithm of (1), we have:

$$\text{Logit } P(X) = \beta_0 + \sum_{i=1}^3 \alpha_i D_i + \gamma_1 Z_1 + \sum_{j=1}^6 \beta_j X_j + e \quad (2)$$

## RESULTS AND DISCUSSION

### Characteristics of Entrepreneurial Firms in Dak Lak Province

Services related to tourism, agriculture, and the processing industry are the main focus areas for entrepreneurial business activities. Mainly, when the COVID-19 pandemic in Vietnam was under control, business activities in Dak Lak were very active. Table 2 displays the traits of entrepreneurial businesses.

Table 2 shows that most entrepreneurs are of majority (Kinh, Thai, or Tay), accounting for over 70% of entrepreneurs, and only 30% belong to groups of ethnic minorities. Most

business owners are over 20, accounting for 63.1%. Regarding education, up to 57% of entrepreneurs have a high school graduation or higher. More than 90% of entrepreneurial activities are related to agriculture, agricultural processing, and services and trading related to tourism. The entrepreneurial capital scale, however, is relatively small. The equity size of up to nearly 70% of entrepreneurial businesses is less than 50 million VND.

The COVID-19 pandemic harmed the Vietnamese economy from 2018 to 2022. By June 2022, up to 74 percent of entrepreneurial firms in Dak Lak province had closed their doors, with only 23 percent planning to reopen.

Table 2. Features of entrepreneurial businesses in Dak Lak Province

| No.                              | Characteristics   | Amount<br>(people, basis) | Percentages<br>(%) |
|----------------------------------|---|---------------------------|--------------------|
| <b>I. Ethnicity</b>              |   |                           |                    |
| 1                                | Kinh, Thai, and Tay   | 146                       | 70.9               |
| 2                                | Minority  | 60                        | 29.1               |
|                                  | <b>Total</b>  | <b>206</b>                | <b>100</b>         |
| <b>II. Gender</b>                |   |                           |                    |
| 1                                | Female  | 146                       | 70.9               |
| 2                                | Male  | 60                        | 29.1               |
|                                  | <b>Total</b>  | <b>206</b>                | <b>100</b>         |
| <b>III. Age</b>                  |   |                           |                    |
| 1                                | Under 20 years old  | 76                        | 36.9               |
| 2                                | Ages 21 or above  | 130                       | 63.1               |
|                                  | <b>Total</b>  | <b>206</b>                | <b>100</b>         |
| <b>IV. Education</b>             |   |                           |                    |
| 1                                | Not graduated from high school                                  | 89                        | 43.2               |
| 2                                | Graduated from High school or higher                            | 117                       | 56.8               |
|                                  | <b>Total</b>  | <b>206</b>                | <b>100</b>         |
| <b>V. Entrepreneurial career</b> |   |                           |                    |
| 1                                | Agriculture   | 86                        | 41.7               |
| 2                                | Agri-product processing   | 8                         | 3.9                |
| 3                                | Trading and services in tourism<br>community-based destinations | 95                        | 46.1               |
| 4                                | Tourism   | 13                        | 6.3                |
| 5                                | Light Industry  | 4                         | 2                  |
|                                  | <b>Total</b>  | <b>206</b>                | <b>100</b>         |
| <b>VI. Capital size</b>          |   |                           |                    |
| 1                                | Less than 50 million VND  | 143                       | 69.4               |
| 2                                | Over 50 million VND   | 63                        | 30.6               |
|                                  | <b>Total</b>  | <b>206</b>                | <b>100</b>         |

Source: Survey data

### Reliability and Exploratory Factor Analysis

We calculated Cronbach's alpha as a measure of internal consistency or a standard of scale reliability. Hair et al. (2009), Pallant (2001), and Nunnally and Bernstein (1994) suggested that a scale that ensures unidirectionality and reliability should reach a Cronbach's Alpha threshold of 0.7 or higher. However, given the nature of a preliminary exploratory study, a

Cronbach's Alpha threshold of 0.6 is acceptable. In this study, we selected Cronbach's alpha of more than 0.6 and the corrected item-total correlation of more than 0.3.

Table 3 shows that all items of the MARKET construct do not meet the reliability requirements (Cronbach's alpha: 0.280; corrected item-total correlation <0.3). Thus, they were excluded from EFA because they are not unidirectional. These items are bolded as presented in Table 3.

Table 3. Reliability testing results

| Items  | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted | Items                                       | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|--|----------------------------------|----------------------------------|---|----------------------------------|----------------------------------|
| <i>POLICY (1): Cronbach's Alpha: 0.665</i>   |                                  |                                  | <i>SUPPORT (6): Cronbach's Alpha: 0.715</i> |                                  |                                  |
| P1   | .519                             | .546                             | S1  | .478                             | .665                             |
| P2   | .332                             | .680                             | S2  | .400                             | .697                             |
| P3   | .387                             | .636                             | S3  | .593                             | .619                             |
| P4   | .576                             | .520                             | S4  | .475                             | .666                             |
| <i>MARKET (2): Cronbach's Alpha: 0.280</i>   |                                  |                                  | S5  | .431                             | .685                             |
| <b>M1</b>                                    | <b>.110</b>                      | <b>.329</b>                      | <i>CULTURE (5): Cronbach's Alpha: 0.700</i> |                                  |                                  |
| <b>M2</b>                                    | <b>.243</b>                      | <b>.055</b>                      | C1  | .520                             | .619                             |
| <b>M3</b>                                    | <b>.131</b>                      | <b>.254</b>                      | C2  | .398                             | .689                             |
| <i>HUMAN C. (3): Cronbach's Alpha: 0.751</i> |                                  |                                  | C3  | .610                             | .551                             |
| H1   | .627                             | .650                             | C4  | .427                             | .674                             |
| H2   | .517                             | .710                             | <i>FINANCE (4): Cronbach's Alpha: 0.700</i> |                                  |                                  |
| H3   | .515                             | .711                             | F1  | .535                             | .739                             |
| H4   | .532                             | .701                             | F2  | .616                             | .649                             |
|  |                                  |                                  | F3  | .621                             | .642                             |

Source: Reliability testing outputs

We followed Hair et al. (2009) to check if the data suited EFA. We selected factors with Eigenvalue  $\geq 1$  and used them in the analytical model. The EFA resulted in the KMO coefficient (Kaiser-Meyer-Olkin) being 0.768 (KMO should be  $0.5 \leq \text{KMO} \leq 1$ ). Bartlett's test (Bartlett's test of sphericity) is significantly tested (Sig Bartlett's Test <0.00). The Total Variance Explained is 62.4% ( $\geq 50\%$ ), and the absolute value of the factor loading coefficient is more significant than 0.5. Thus, it implies that EFA techniques are reasonable in this study.

Table 4. Rotated Component Matrix

| Items | Component (1) | Component (2) | Component (3) | Component (4) |
|-------|---------------|---------------|---------------|---------------|
|       | Renamed       |               |               |               |
|       | FINANCE       | CULTURE       | GOV4.0        | INFRAS        |
| F3    | .833          |               |               |               |
| F2    | .823          |               |               |               |
| F1    | .679          |               |               |               |
| C3    |               | .787          |               |               |
| C4    |               | .719          |               |               |
| C1    |               | .708          |               |               |
| C2    |               | .551          |               |               |
| P1    |               |               | .742          |               |

|    |      |      |
|----|------|------|
| P4 | .735 |      |
| S1 | .615 |      |
| H3 | .592 |      |
| S2 |      | .859 |
| S3 |      | .717 |

Source: EFA outputs

Items S4, S5, H1, H2, H4, P2, and P3 were dropped out of the EFA because their loading coefficients were insignificant. The Rotated Component Matrix by the orthogonal method (varimax) is presented in Table 4. It is worth noting that the factor loading coefficients of all items are more extensive than 0.5. Additionally, we found four components whose items are arranged differently than the original theoretical model. Based on the questions corresponding to columns "component (3)" and "component (4)", we named component (3) "GOV4.0" (government and 4.0 technology) and component (4) "INFRAS" (infrastructure) (see Table 4).

### Logistic Regression Analysis

In light of the findings of the EFA and the information provided by Model (2), we develop a binary logistic regression model with the help of the variables detailed in Table 5. The outcomes of the regression are presented in Table 6.

We do not have sufficient evidence to support the hypothesis that age, ethnicity, and gender influence the likelihood of a company surviving. As a result, businesses were negatively impacted by the COVID-19 pandemic, regardless of the characteristics of their owners. The pandemic caused by COVID-19 is the primary factor that leads business owners to close their doors. It significantly impacted the viability of businesses run by entrepreneurs, with a regression coefficient of -1.01 and an odd ratio of 0.364, respectively. This finding lends credence to the hypothesis that the COVID-19 pandemic is the primary factor contributing to the failure of businesses in Dak Lak province of Vietnam. Companies in the tourism sector fared even worse during the pandemic, as their revenues plummeted. A coefficient of -6.27 is assigned to the TOURISM dummy variable.

Table 5. Dependent and independent variables in binary logistics model

| Variables                    | Descriptions   | Type   | Ex. Sign |
|------------------------------|--|--------|----------|
| <b>Dependent Variable</b>    |  |        |          |
| Y                            | 1, if the entrepreneurial business is continuing; 0, otherwise   | Binary |          |
| <b>Independent Variables</b> |  |        |          |
| ETHNICITY                    | 1, if the correspondent belongs to a majority ethnic group (Kinh, Thai, or Tay ethnicity; 0, otherwise | Dummy  | +/-      |
| AGE                          | 1, if the entrepreneur is over 35; 0, otherwise  | Dummy  | +/-      |
| GENDER                       | 1, if the entrepreneur is male; 0, otherwise   | Dummy  | +/-      |

|                 |  |          |   |
|-----------------|--|----------|---|
| COVID19         | the negative impact of COVID-19  | Discrete | - |
| TOURISM         | 1, if the entrepreneurial firm operates in tourism or trading or services in community-based tourist destinations ; 0, otherwise | Dummy    | - |
| FINANCE         | Availability and accessibility of the financial market, ability to refinance debts   | Cont.    | + |
| CULTURE         | tolerance of risk & failure; visible success, social status of entrepreneurs   | Cont.    | + |
| GOV4.0          | supporting policies and 4.0 technology   | Cont.    | + |
| INFRAS          | Logistics services and availability of experts   | Cont.    | + |
| FINANCE*TOURISM | Interaction between FINANCE and TOURISM variables  | Cont.    | + |
| CULTURE*TOURISM | Interaction between CULTURE and TOURISM variables  | Cont.    | + |
| GOV4.0*TOURISM  | Interaction between GOV4.0 and TOURISM variables   | Cont.    | + |
| INFRAS*TOURISM  | Interaction between INFRAS and TOURISM variables   | Cont.    | + |

Source: Designed by authors based on Isenberg, 2011

It is not significant to draw the conclusion that the interaction between government policies and 4.0 technology (GOV4.0) helps entrepreneurial firms maintain their operation during the COVID-19 pandemic because of the role that Dak Lak EE plays, as this is not the case. This finding lends credence to the theory that the policies of the government regarding taxes and other forms of support do not become robust enough to guarantee the survival of businesses. During the time period of COVID-19, business owners are required to solve the problems that they encounter all by themselves. With a coefficient of -1.6, the government policies and 4.0 technology (represented by GOV4.0\*TOURISM) decrease the likelihood of firm survival in the tourism industry, which is the opposite of what we expected. This is because those in the tourism industry with tertiary education (H3) and access to the internet (S1) could gather more data on COVID-19 and predict a worsening situation. So, they boldly decided to shut down operations before it was forced upon them.

The FINANCE component significantly contributes to the survival of entrepreneurial firms with 95% confidence (coefficient of 0.70 and odd ratio of 2.0). Thus, credit organizations, especially micro-credit ones, serve early-stage businesses undergoing a crisis (Items: F1, F2). In addition, supporting firms to refinance their debts is an effective policy to help them survive (Item F3). This finding is similar to Subashini et al. (2023). A startup's likelihood of surviving the pandemic is greatly enhanced by cultural factors (CULTURE) at a 95% confidence level. Unbelievably, the drive to keep their businesses going is rooted in a culture that embraces risk-taking, failure, and high ambition (C1, C2, C3, C4). At 95% confidence, the culture lent its strength to the tourism industry, spawning thriving businesses as CULTURE\*TOURISM has a coefficient of 2.2. This finding is consistent with the work of Althuwayb and Badawi (2023).

Table 6. Impact of Factors on the viability of entrepreneurial firms in the tourism industry

| <b>Independent Variables</b> | <b>B</b>         | <b>SE.</b> | <b>Sig.</b> | <b>Odd Ratio</b> |
|------------------------------|------------------|------------|-------------|------------------|
| ETHNICITY                    | .358             | .412       | .385        | 1.430            |
| AGE                          | .750             | .559       | .180        | 2.117            |
| GENDER                       | .092             | .360       | .799        | 1.096            |
| COVID19                      | <b>-1.010***</b> | .229       | .000        | .364             |
| TOURISM                      | <b>-6.272*</b>   | 3.367      | .062        | .002             |
| FINANCE                      | <b>.701*</b>     | .379       | .064        | 2.015            |
| CULTURE                      | <b>.046**</b>    | .549       | .933        | 1.047            |
| GOV4.0                       | .509             | .498       | .307        | 1.663            |
| INFRAS                       | -.357            | .365       | .328        | .700             |
| FINANCE*TOURISM              | .128             | .560       | .819        | 1.137            |
| CULTURE*TOURISM              | <b>2.262**</b>   | .945       | .017        | 9.607            |
| GOV4.0*TOURISM               | <b>-1.627**</b>  | .720       | .024        | .197             |
| INFRAS*TOURISM               | .483             | .538       | .370        | 1.621            |
| Constant                     | .596             | 2.277      | .794        | 1.815            |
| -2 Log-likelihood:           | 197.62           |            |             |                  |
| Cox & Snell R Square:        | .297             |            |             |                  |
| Nagelkerke R Square:         | .406             |            |             |                  |
| N                            | 206              |            |             |                  |

Note: \*, \*\*, \*\*\*: Statistical significance at the 10% , 5%, and 1% level, respectively.

Source: Regression results

We observed that our results deviated somewhat from those predicted by the model proposed by Isenberg (2011). Other hypothesized components of the Dak Lak EE, such as POLICY (Hypothesis 1), the MARKET (Hypothesis 2), HUMAN CAPITAL (Hypothesis 3), and SUPPORT (Hypothesis 6), and their roles in sustaining entrepreneurial activity, remain unclear. We cannot confidently say that these components positively affect a company's survival ability if an entrepreneur runs it during hardship. In other words, these parts weren't doing their jobs or were missing crucial components. Therefore, we argue that the province of Dak Lak requires targeted policies and initiatives to foster the growth of these aspects of its EE.

## CONCLUSION

This study interviewed 206 entrepreneurs in Dak Lak province, including 108 in the tourism industry and 98 in other sectors. We looked into how the EE components affected the survival of entrepreneurial firms during the COVID-19 pandemic (2018-2022). We discovered that the pandemic had a negative and significant impact on the efficiency and ability of entrepreneurial firms to remain in business. Travel restrictions, social distancing, and city lockdowns significantly impacted early-stage companies. As a result, they are unable to face the crisis. The pandemic harmed tourism companies even more severely. We discovered that 74% of entrepreneurial firms ceased operations, with only 26% surviving the pandemic. We are not confident enough to assert that entrepreneur characteristics such as ethnicity, gender, or age influence the impact of the COVID-19 pandemic on business viability.



We found that FINANCE and CULTURE components play a positive role in assisting early-stage firms in tourism. Specifically, the availability and accessibility of the financial market, including micro-credit, support entrepreneurial firms in maintaining their operation. In addition, the culture of tolerance of risks and failure, efforts for success, and high ambition is the basis for the action of entrepreneurs to continue their businesses. However, the roles of other components of the EE are very blurred. Therefore, we suggested that Dak Lak province develop its EE by upgrading its elements as soon as possible to cope with future crises.

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